



FOSTERING CREATIVITY and INNOVATION

DR. RASHID ALLEEM

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Dr. Rashid Alleem



Fostering Creativity & Innovation

Alleem Research & Development Center

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PRAISE FOR

FOSTERING
CREATIVITY
and
INNOVATION

This is the first challenge in the world to progressively and comprehensively address the fundamental importance of productivity and sustainable-growth-ability in terms of creativity and innovation. It implies that the UAE stands for “Uncompromisingly” developing with “Advanced-ideas” in “Entrepreneurship manner”.

Dr. Akima Umezawa
Consul-General of Japan in Dubai

Enjoyed reading the Creativity and Innovation goal. Very well-articulated and indeed it is need of the hour. Readers can hugely benefit from understanding the various spheres and how we can vision ourselves and recognize those innovation blind spots around us. Truly, our young talent is well showcased but also the book talks about the various inno-

vation initiatives from which each one of can benefit and carry forward our innovation dream and keep entrepreneurial spirit live to combat the future challenges. A must read for all to envisage innovation future!

Dr Flevy Lasrado

Discipline Leader

University of Wollongong in Dubai, UAE

In our fast-paced world, technology is constantly changing and the business world evolving. Embracing innovation as a culture isn't an extra step to get ahead; it's a necessity for keeping up. We need to be productively restless; to keep our eyes constantly turned towards the future.

The book, with its practical approach, showcasing a number of case studies, and real stories of role models who embraced an innovative mindset to change the world, constitutes a road map to individuals and organizations, it confirmed what I always advocate for as an innovation is not a single shot of inspiration or a motivational slogan to sling around the office, but a culture to foster and grow.

Hanane Benkhallouk

Innovation Strategist

Executive Director, Sustain Leadership Consultancy, UAE

Dedicated to my beloved son Obaied.
I love you more than you will ever know.
Keep dreaming BIG!

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FOREWORD

There is perhaps no better time than what we are going through for a book on creativity and innovation. The global experience of the pandemic calls into question the models and certainties of our social organizations and economic systems and therefore questions our ability to imagine, introduce and manage change.

At the same time, Dr. Rashid Alleem's book is a tribute to the spirit of the United Arab Emirates and to that constant and genuine tension of the leadership and of the whole society of this young country towards the future, without fear of questioning consolidated schemes or of setting ambitious goals. What other country, after all, has a space program that plans to establish the first human settlement on Mars in 2117 (after launching the first probe towards the Red Planet in the last weeks)?

Creativity, as the author teaches, is unprecedented perception, intuition, original thought in all its forms; different from a flash or an isolated point, it is also part of a defining process, the analysis and synthesis of things. Inseparable from the impetus, creativity pushes to intervene effectively on reality without being afraid of the associated risk. However, creativity is not enough on its own: alongside purpose and commitment, the executive moment cannot indeed be missing, supported by persevering will, research and organization. Therefore, creativity and innovation, marks of the future, are constantly reminiscent of each other, and to cultivate one is to empower the other whether it is art, design or any kind of entrepreneurial endeavor.

In this inseparable pair, creativity is a priority; it is guide and lifeblood to the innovative solution. For this reason, *Fostering Creativity and Innovation* insists on it in a special way by pointing out the need for a real culture of creativity, an educational path that accompanies the individual in the rediscovery of childhood personality, of play and joy, of curiosity and exploration, and of imagination, independent and free.

However, there is another aspect that the author stresses and that I find crucial: the link between the process of creation-innovation and connection, which is the essence of our humanity as intelligent creatures (intelligence means precisely “ability to connect”). Connection between things, between concepts, between areas of knowledge, as a genius like Leonardo da Vinci, quoted by the author, shows; but also among individuals, people and cultures. Connection, I add, that requires physical interaction, sharing of spaces and sensory experiences, which technology can temporarily make up for (as we see in these times of physical distancing), but which it can never replace with virtual relationships.

If it is true, therefore, that without creation there is no innovation; it is also true that without connection there is no creation. And when the world meets in the UAE next year for EXPO2020 Dubai, which will probably be the first global event after the pandemic, the theme “*Connecting minds, creating the future*” will prove to be the most appropriate one.

Nicola Lener

Ambassador of Italy to the UAE

INTRODUCTION

The purpose of this book

*“Innovation is no longer an
option—it’s the gateway of
success in today’s business
world.”*

- Dr. Rashid Alleem

WELCOME!

I strongly believe that if you are reading this book you have the honor and the obligation to tackle one of the gravest needs of the 21st century: Fostering creativity and innovation. Edward de Bono, a psychologist from Oxford University, said: “There is no doubt that creativity is the most important human resource of all. Without creativity, there would be no progress, and we would be forever repeating the same patterns.” This is the central focus of this book.

ANOTHER BOOK ABOUT CREATIVITY AND INNOVATION?

You may ask, Why this book? Thousands of books were written on the topic and more will be published this year. Why add one more to an already crowded shelf?

Permit me to give you a little background.

Let’s go back to June 2019 to a lovely team dinner in Dubai. Throughout the evening, we had a lively discussion about the Alleem 21 sustainable development goals and the importance of them in today’s world. Our conversation centered on the list’s second goal, Fostering Creativity and Innovation, and a debate ensued around the importance of thinking big espe-

cially as the whole world is running at a breakneck speed. As soon as I got home I decided to write this book. The book not only includes heartwarming stories and motivational sayings about creativity and innovation, but also shows that we are all capable of making the world a better place on a massive scale. There is no better time than now to work together toward a bright future for all, despite our differences!

This book will inspire you to dream big. Though I trust you will find this book inspirational, motivational, and practical, it is not a 'how-to' book. This book is for anyone in any organization, from the CEO to young managers, who is responsible for addressing and solving creative business challenges and looking for innovative solutions to make a better tomorrow.

That may be what attracted you to this book! I strongly believe that if you are reading this book you will learn what it takes to drive innovation and lead organizational change.

So welcome to the world of creativity and innovation. Knowing the value of your time, I have tried my best to be precise and keep the chatter to a minimum. I am confident you will discover original and practical new valuable creative thinking tools and techniques you can use. More important, though, I hope certain ideas leap out at you. Work with those ideas first.

Another piece of advice on how to leverage the knowledge and the wisdom in this book to full advantage: Feel the words as you read them, dog-ear the pages, and highlight as you go. Make notes along the way on what interests you the most, and how you might apply it and share it.

At the end of each chapter, stop to think about a key insight you gained and how it can help you to create a more innovative organization. I like what Gary Hamel said, "You can buy

knowledge by the yard today, but insight is still quite rare.” If you find valuable insight in this book, then I have achieved my goal in writing it.

I’m delighted to see this book reach leaders everywhere through the free download at alleem.com

Wishing you the best!

Respectfully,

Rashid Alleem

Sharjah, UAE

February 29, 2020



CREATIVITY

“One’s mind, once stretched by a new idea, never regains its original dimensions.”

- Oliver Wendell Holmes

1

CREATIVITY

In today's knowledge economy, creativity is our competitive edge. It is more important than ever and has moved from a 'nice to have,' to a 'need to have.' But many organizations seem to believe that creativity belongs just in sales, marketing, and R&D. But creativity can benefit every function of an organization and influence the way business gets done for the better. To get there, managers will first have to change their thinking to approach the changing complexity of the business world and the need to embrace creativity to make wiser decisions. Most of the ways we were taught to think, to reason simply don't give us means to make wise decisions any more.

Organizations need creativity not just as an occasional exercise but as the heart of their business.

You may ask, creativity for what? By whom? How to achieve it? What is creativity anyway? Let's dig in.

WHAT IS CREATIVITY?

The dictionary defines creativity as "the ability to make or otherwise bring into existence something new, whether a new solution to a problem, a new method or device, or a new artistic object or form." In their book *Corporate Creativity*, Alan G. Robinson and Sam Stern define corporate creativity

as such: “A company is creative when its employees do something new and potentially useful without being directly shown or taught.”

So corporate creativity is the use of imagination or original ideas to create something new. It is characterized by the ability to perceive the world in new ways; do something unpredictable, original, and unique; and find a fresh perspective or thought on the status quo. The created item can be anything; it can be *intangible* (such as an idea, a scientific theory, a musical composition, or a joke!) or a *physical* object (such as an invention, a literary work, or a painting).

Creativity is the ability
to reimagine existing
elements in new way.

According to Cornell Professor Robert Sternberg, “Creativity is the production of something original and worthwhile.” My favorite definition of creativity comes from author Rollo May, who described it as “the process of bringing something new into being.” He says, “Creativity requires passion, purpose, and commitment. It brings to our awareness what was previously hidden and points to new life.”

EVERYONE IS GIFTED

At times, I ponder, are we born creative or made creative? What is so fantastic about being creative? Are we creative by choice or by chance? Creativity is definitely that *extra* factor

that adds a spark to your persona and distinguishes you from the rest. It could be the way you talk, the way you dress, the way you cook, or the way you perceive any situation in life.

Simply put: I believe *everyone* is creative and gifted. We're all born with immense natural talents, but by the time we've been through schools and education too many of us have lost touch with them. What happened? Often, suppressive forces directed our thinking toward mediocre levels. You may have heard, "You need a more practical dream" or that your ideas were "stupid, naïve, or foolish." It is your *environment* that either helps creativity proliferate or nips it in the bud. The world is jam-packed with people who would raise eyebrows at your creative endeavor, but there are plenty who see the value of creativity, too. So stop your negative self-talk and saying, *I'm not an ideas person*. Everyone has ideas, and everyone is creative.

JUST START ACTING CREATIVE

If you want to become more creative, start acting like you are creative. Suppose that you wanted to be an artist: You would begin by doing what artists do, like paint every day. You may not become another Vincent Van Gogh, but you'll be more of an artist than someone who has never tried. Similarly, to increase your creativity, you need to make it a daily habit.

Try the following creative-thinking habits:

- Brainstorm lots of ideas—the more the better!
- Consistently challenge assumptions.
- Record your ideas and the ideas of others in a notebook.

- Learn from your failures and the failures of others.
- Constantly look for ways to improve your ideas and products and the ideas and products of others.

You may not become the next Thomas Edison, but you'll become much more creative than someone who has never tried.

The point is that the key is to focus on *perception*—new ideas come when we perceive things differently.



2

TRAIN YOUR BRAIN

As a speaker, audiences often ask me: “Can creativity be taught?” “Can you get your creative juices flowing?” “Is creative genius reserved for chosen few?” “Where do I begin my creativity journey?” The truth is, break-through creativity is in all of us. Human brains don’t come with a manual. We are not computers with downloadable options. And we receive only limited instruction throughout our education. Over time we developed the mental software programs needed for logic, reason, and memory. There is no known way to generate creative genius, or get people to produce groundbreaking ideas. Yet, it is possible to teach different types of thinking. We are all creative and with the use of a few simple tools, we can all become even more creative. It is us. Creativity is everywhere and in everyone who has the courage to tap into his or her full potential.

The brain is the largest and most complex mass of nerve tissue in the human body. It is an amazing mechanism. It receives and analyzes messages from internal organs and from your external environment. The brain is so incredible and mystifying and our understanding so limited that we’ve barely scratched the surface of what it’s capable of! Neuroscience shows that our brains are “plastic,” which means they are capable of being reshaped, even in adulthood. Impressive, isn’t it?

Just like working out at a gym helps us become more physically fit, exercising our brains can improve our mental performance and help you become the best version of yourself. Just like a gym-training program, overnight results are not possible.

According to the latest neuroscience studies, novelty comes when we perceive things differently. Interestingly, the human mind has an innate tendency to slip into routine shortcuts so bombarding new perceptions or recalibrating our brain requires effort and soaks up a lot of energy. Have you not felt completely mentally drained when you try to be creative or innovate a bit? Certainly, yes.

It's worth it to stick with it. Continuous training improves performance on thinking, and some training programs are more effective than others. Universities and colleges around the world have a lot of good programs about the subject. It's also worth noting that there are self-help books, articles, and online seminars that provide information, tips, techniques, and access to creativity. You need to discover the one that's most effective for you. Once you've completed the right creative thinking training program, you'll find thinking habits will come more naturally to you.

“You can't use up creativity.

The more you use,
the more you have.”

Maya Angelou

So never dream creativity as something separate from us. Creativity is us. Yet, be careful. Remember, this is a *process*. It's not easy or straight forward because, after all, creativity is not an end product. It needs direction from you. It needs energy and time. And this is what you are going to discover in this book. The book provides frameworks, advice, and tools you need to excel in your career. With real-life stories and best practices from ambitious professionals and leaders you will stand out from the crowd regardless of your leadership / management level or role.

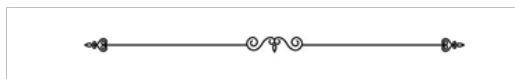


3

YOUR BRAIN ON CREATIVITY

While doing my research on creativity and innovation, I read the great article “*Your Brain on Creativity*” by Grant Hilary Brenner, a New York-based psychiatrist and an expert on mental health, relationships, and self-care and wellness. The article was published in *Psychology Today* in February 2018. I would like to share part of that article with my dear readers:.

“Creativity is amazing. Play is amazing. Being original is amazing. Amazing, astounding, thrilling, asymptotic. Divergence opens up possibilities, creating the flexibility to be extraordinary, to stand out from the crowd and enliven others with a spellbinding display of wit and artistry. When attuned to the environment, when humor is working well and the timing is right, the ideas flow... with art which speaks to the zeitgeist, capturing the ineffable in an ineffable way... creativity leads to deep communion and empathy.



4

I WAS HERE

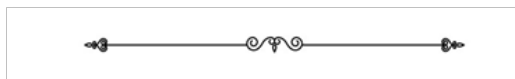
Anaïs Nin once said, “We don’t see things as they are, we see them as we are.” This quote will forever be true to me. During my recent visit to Singapore, I was invited to visit the National University of Singapore (NUS) where I had a chance to visit the University Cultural Center.

I WAS HERE is a big sculpture, which beautifies the entrance of the NUS museum where I discovered four collections and more than 8,000 artifacts and artworks of ancient Chinese materials, Indian classical sculptures, modern and contemporary Chinese, Southeast Asian, and Singaporean art. The NUS Museum also serves as a vital curricular resource, providing an exciting learning experience for students.

While touring the museum, I thought about how the artifacts and artworks of ancient times were so uniquely made and about how creativity and innovation are linked together. I then read this beautiful statement in the museum’s newsletter: “Art encourages creative thinking and lets you come up with your own unique solutions. Unlike, math, there is no one correct answer in art! Out-of-the-box thinking also stimulates your brain.”

To me, it all seemed to boil down to this: Highly creative thinkers have the ability to see the connections that lead to

unexpected and original products and creativity is the ability to bring new and valuable things into being.



5

THE 'BEING CREATIVE' ROOM

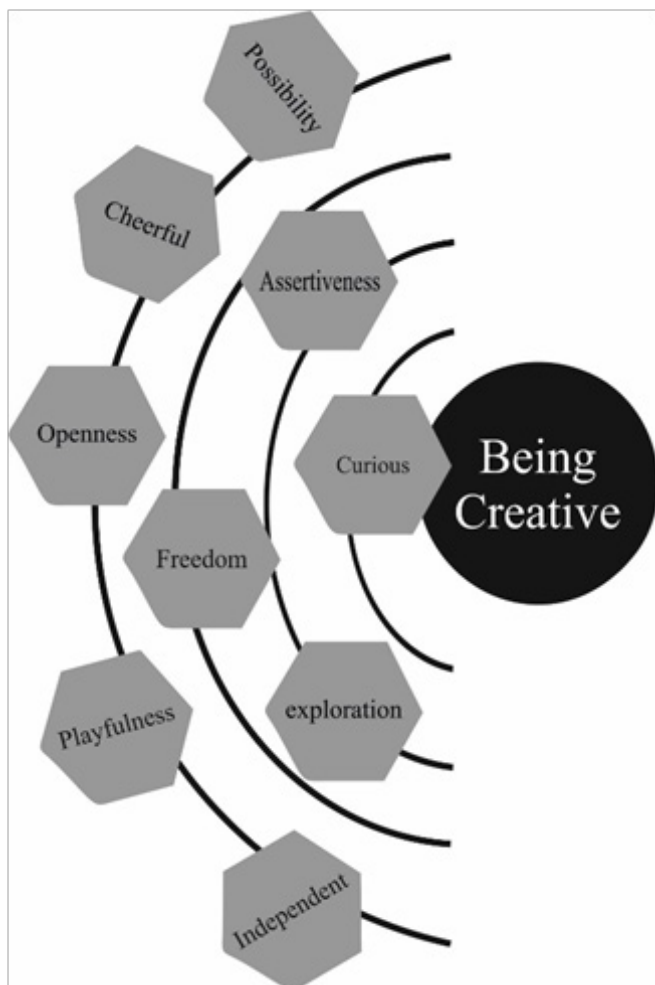
One of our meeting rooms in our Sharjah Electricity and Water Authority (SEWA) headquarters building is named 'Being Creative.' It was designed to foster creative thinking. The dictionary defines "being" as "something that actually exists; it is an inner state." Being Creative means we are all born creative—it is one of the generous qualities with which we are gifted. We are all inherently creative, whether we accept it or not, and whether we activate it or not.. It's up to you activate it. You don't have to be young to start a creative life or to start think creatively. Just say 'welcome' to the first tangible step in your creativity journey.

The 'Being Creative' room is one of the signature rooms in SEWA headquarters. It's such a positive environment, from the welcoming design to the Pablo Picasso quote on the wall: "Every child is an artist. The problem is how to remain an artist once we grow up."

Another wall is decorated with a colorful graphic that features a large 'Being Creative' circle in the middle. Childlike thinking qualities surround the circle to emphasize the notion that creativity is built in from birth. The qualities are: playfulness, cheerful, curious, freedom, independent, exploration, assertiveness, possibility, and openness. The purpose is to cultivate open-ended thinking aimed at generating fresh

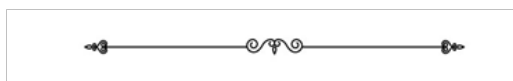
views and novel solutions. This idea is illustrated in diagram 1 below:

Diagram 1 children's thinking qualities



CHILDLIKE THINKING

In this room, we challenge ourselves to solve unsolved problems by giving our minds a way to look at the situation from a new perspective. Something in our consciousness must shift in order for us to be able to see how to act positively to the challenge of the time. When we imagine ourselves as seven year olds, it vastly increases our creative output on a variety of challenging tasks. A child's view of the world is uncomplicated and direct. We take inspiration from children as we foster innovation.



6

CREATIVITY AND ARTIFICIAL INTELLIGENCE

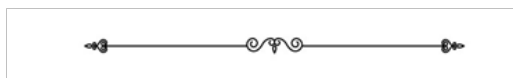
Artificial intelligence (AI) is making a greater impact than any aspect of business today. Digital technologies are transforming how we work, play, think, and relate to each other.

There is no doubt in my mind that AI is going to play a major role in our life and our thinking process. In fact, countries across the globe are putting AI as one of their top strategic goals. In 2017, for example, UAE appointed His Excellency Omar Bin Sultan Al Olama as the country's first Minister of State for Artificial Intelligence. At only 27, his responsibilities include investing in the latest technologies and tools of artificial intelligence and applying them in various sectors to enhance government performance.

Yet I always say that AI may give you everything except the human heart and feelings. Don't mistake me, I'm not suggesting that AI is not worth investing in. Of course not. Without a doubt, AI has benefitted millions of people all sorts of ways and touches virtually every facet of their lives. It would be ridiculous to suggest otherwise. But whatever advancements and technological solutions AI helps bring to the world, we still need the human mind, heart, and soul. People are special!

So it didn't surprise me to see Jeff Weiner, the CEO at LinkedIn, share a post on LinkedIn on October 27, 2018, declaring that the jobs of the future require two major attributes: soft skills and empathy. He argued that AI can accomplish everything that humans can do (including coding), but robots can't equip themselves with team synthesizing qualities or communication skills.

Machines and computers will always be our tools. They will do our orders, as and when we tell them. Ultimately, a computer lacks imagination or creativity to dream up a vision for the future. It lacks the emotional competent that a human being has. The computer is helpful in editing your idea, but it's not really good at generating ideas. That is the main difference in a human's brain and a computer's brain. Thus, creativity will be the soft skill of the future. The cartoonist Tom Gauld says he stays away from the computer until he's done brainstorming his comic strips because once the computer is involved, "things are on an inevitable path to being finished. Whereas in my sketchbook the possibilities are endless."



7

CREATIVITY AND PASSION

THE PATH TO CREATIVITY

Passion and interest are necessary for creativity to occur. Creativity is something you do as a result of your passion, or internal desire to do something. In fact, passion fuels creativity and innovation. An interesting definition of passion from Mapmaker says, “Passion is the energy that comes from bringing more of you into what you do.”

Also worth mentioning are these thoughts on passion from *Innovation Management*, a preeminent resource for innovation news and best practices. This was posted on March 23, 2005:

“We live and work in exciting, complex, and unpredictable times. There is little space at the head of the line for those too timid to risk giving voice to the full force of their innate creativity.

For those unwilling to allow the fervor of their belief in an idea to flow freely, a future of passive observation awaits. People who retreat in the face of resistance will find themselves escorted off the playing field and into the grandstand.

Deep within all human beings there is the fire of passion, the

audacity of innovation, and the will to persevere. If yours has been dampened a bit by the vicissitudes of life, find a quiet spot, bring your attention to your breath, and allow the cells of your body to remember the life that burns within. Take a moment or two to recall what matters to you. Fantasize about the way you want things to be. Relax into the notion that all good things require both commitment and resilience.”



PASSION FOR EXCELLENCE

You cannot be creative and innovative until and unless you have a strong feeling of enthusiasm or excitement for your job, for what you do, and for what you love to do. In short, creativity comes when you are *passionate* about your work. People will be most creative when they feel motivated by the interest and the challenge of the world itself; this is what we call intrinsic motivation because it comes from within.

In his book, *The 21 Indispensable Qualities of a Leader*, John C. Maxwell shares four truths about passion and what it can do for you as a leader. I would like to share these parts:

1. PASSION IS THE FIRST STEP TO ACHIEVEMENT

Your desire determines your destiny. The passion of great leaders is undeniable: Gandhi for human rights, Winston Churchill for freedom, Martin Luther King, Jr. for equality, Bill Gates for technology.

Anyone who lives beyond an ordinary life has great desire. It's true in any field: Weak desire brings weak results just as a

small fire creates little heat. The stronger your fire, the greater the desire and the greater the potential.

2. PASSION INCREASES YOUR WILLPOWER

It is said that a dispassionate young man approached the Greek philosopher Socrates and casually stated, “O great Socrates, I come to you for knowledge.”

The philosopher took the young man down to the sea, waded in with him, and then dunked him under the water for thirty seconds. When he let the young man up for air, Socrates asked him to repeat what he wanted.

“Knowledge, O great one,” he sputtered. Socrates put him under the water again, only that time a little longer. After repeated dunkings and responses, the philosopher asked, “What do you want?” The young man finally gasped, “Air. I want air!” “Good,” answered Socrates. “Now, when you want knowledge as much as you wanted air, you shall have it.”

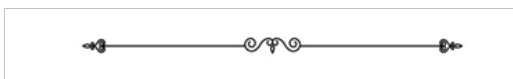
There is no substitute for passion. It is fuel for the will. If you want anything badly enough, you can find the willpower to achieve it. The only way to have that kind of desire is to develop passion.

3. PASSION CHANGES YOU

If you follow your passion—instead of others’ perceptions—you can’t help becoming a more dedicated, productive person. And that increases your ability to impact others. In the end, your passion will have more influence than your personality.

4. PASSION MAKES THE IMPOSSIBLE POSSIBLE

Human beings are so made that whenever anything fires the soul, impossibilities vanish. A fire in the heart lifts everything in your life. That's why passionate leaders are so effective. A leader with great passion and few skills always outperforms a leader with great skills and no passion.



8

CREATIVITY IS CONNECTING THINGS

As Edison said, “Nearly every man who develops an idea works it up to the point where it looks impossible, and then he gets discouraged. That’s not the place to become discouraged.” Indeed, that’s the place to start looking for a connection and finding a purpose in your thinking. The question is then, *How can this be?*

There are success stories of individuals and organizations that made the leap to employees’ engagement and idea generation.

Let’s talk about story from Japan.

FIND-A-WAY ATTITUDE

In November 2019, I was invited by the Japan foreign ministry to visit Japan and meet Japanese officials, global brands, and corporate leaders as recognition for my efforts to enhance and support the business relationship between UAE and Japan. Part of the trip was to use the bullet train to travel from Kyoto to Tokyo. This trip was very memorable as I had the chance to see and wave to His Majesty Naruhito and Her Majesty Masako, who happened to be on the same train. We were so happy to meet.

The origin of the bullet train is also very unique. The story goes that when Japanese engineers proudly unveiled the latest model of the bullet train, they didn't anticipate the downside of speed. The new train came zooming out of tunnels so fast that it created a sonic boom. Neighbors from half a kilometer away complained. The sound was clearly out of regulation, putting the new train at risk of being decommissioned!

Company engineer Eiji Nakatsu studied the problem. He recognized that the sound was the result of the train hitting the higher air pressure outside when it emerged from the tunnel. He went in search of an analogy or a similar experience that would help him study something that moved seamlessly at high speed from a low-pressure environment into a high-pressure one. From a researcher point of view, that can mean looking at things in ways people haven't looked at before.

“Imagination is more important
than knowledge.”

Albert Einstein

Nakatsu was also a birdwatcher and knew that a kingfisher could enter the water without creating a ripple. The long wedged shape of its beak allowed it to move seamlessly from air to water. He redesigned the front of the train to mimic the kingfisher's beak. The connection he made *not* only resolved the noise problem, it let the train use 15 percent less electricity and travel 10 percent faster.

Every thought and action you take corresponds to a series of neurons in your brain. And these neurons connect to other neurons to make what researchers call neural maps. For instance, when you think of the color red, you don't just think of the color itself, but also likely an object such as an apple or a fire truck. The color is connected to something concrete in your brain. And it does this for higher-level actions as well. Caroline Webb notes in *How to Have a Good Day*, "If you once spent an afternoon cranking out great work while settled into that window seat [at home], your 'window seat' neural network might be connected with the one representing 'extremely productive and focused behavior.'"



9

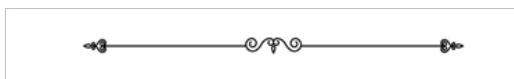
WHAT IF

Steve Jobs frequently said, “Creativity is connecting things.” And, I believe, creativity is connecting the dots that aren’t next to each other. With that in mind, I saw this in action when I visited the Singapore Innovation Center (SgIC), which focuses on new innovations for consumers.

The visit took place on March 28, 2014, the inauguration day of SgIC, which marks a bold step forward in Procter & Gamble’s (P&G) commitment to the 4.8 billion lives they touch worldwide. I had the chance to meet Yuko Nakamura, Director of P&G SgIC, and Cecilia Tan, Director Global Government Relations & Public Policy, Asia Pacific who were kind enough to provide a tour of the business units and departments and allow me to experience some of the new products. They have around 450 engineers and scientists working together in this center that serves as an international innovation hub for P&G’s global hair care, skin care, home care, and personal health and grooming products.

As the saying goes, “Imagination begins with a question.” During the meeting, the team showed me a short video titled “What If,” which amazed me and pushed me to question myself to find easier solutions to our daily problems. The video

is all about your thinking ability to have innovative solutions that could make human life healthier, easier, better, convenient, and sustainable.



10

ANALOGY THINKING

Let me introduce you to analogy thinking, a simple tool that may help you to identify and apply the best feature from other solutions. It helps you to focus and look at the best practices from your industry and others and copy what works.

To get clear on this, let me say a few words about the term “analogy.” According to the Oxford Dictionary, an analogy is a comparison between one thing and another, typically for the purpose of explanation or clarification. Here are some examples of simile, one of the main types of analogy:

- As busy as a bee.
- As happy as a calm.

Analogies function to describe or explain one thing by examining its similarities with another thing and to understand the connection between them. Sometimes the things being compared are quite similar, but other times they could be very different. Nevertheless, an analogy explains one thing in terms of another to highlight the ways in which they are alike.

Like many thinking techniques, Analogy Thinking consists of three simple steps:

STEP 1: GENERATE AN ANALOGY

Select an action you can compare your situation to. This can be anything from “planning a meeting” to “making up your room.” It doesn’t really matter, as long as the action doesn’t seem to relate to your subject.

STEP 2: FIND SIMILARITIES

Once you’ve created an analogy, it’s time to write down as many similarities as you can think of. Use your imagination and have some fun with it. You’ll find it much easier than it sounds.

STEP 3: USE SIMILARITIES TO GENERATE IDEAS

Go through the similarities to find interesting insights. What is there that you can use to start generating ideas? Look for new ways to view at your situation.

“Good artists borrow and
great artists steal.”

Unknown

Let’s go through an amazing story about the analogy thinking.

FINDING THE PERFECT FALL DRINK

We all are very familiar with Starbucks, an American coffee company and coffeehouse chain founded in Seattle, Washington in 1971 that now has more than 30,000 locations worldwide.

In 2003, Peter Dukes was a product manager in Starbucks' espresso division. The idea of seasonal Starbucks drinks wasn't new at the time. The company had just seen something that hinted at a bright future—the Peppermint Mocha debuted to great success during the 2002-2003 winter holiday season. Could the Peppermint Mocha's success be replicated? And if so, could it work for different seasons?

Dukes was tasked with capturing Peppermint Mocha levels of success with a new drink for the autumn season. According to Seattle Met's 2014 deep dive into the Pumpkin Spice Latte (PSL), in the spring of 2003, Dukes and the R&D team brainstormed a list of 20 possible fall latte flavors. Next, they surveyed Starbucks' customers about which latte ideas most appealed to them. Surprisingly, the idea of "Pumpkin Pie Latte" just didn't work for most of the respondents and instead they favored chocolate- and caramel-based drinks. But when the time came to narrow the list of 20 down to four to find one winner for development approval by the higher ups, Dukes and his team included the pumpkin pie option anyway!

According to company lore, they all gathered and literally ate pumpkin pie while drinking espresso and tried to figure out which elements of the baked good played best with the espresso, and ultimately decided to focus on two main components: Pumpkin and Spice. They mocked up drink after drink, playing with the flavor profiles of these two compo-

nents. The winner included high levels of both pumpkin and spice, and when it came to name the espresso recipe, they named it “PSL.” Hence, the Starbucks PSL was born by combining two completely different sorts of flavors.



11

DIVERGENT THINKING

Divergent thinking is the ability to generate many possible answers to a question, whereas convergent thinking focuses on a single answer, winnowing down the options. Let's have a closer look.

Divergent Thinking

Divergent thinking is an idea generation technique (such as brainstorming) in which an idea is followed in several directions to lead to one or more new ideas, and, in turn, leads to still more ideas. Convergent thinking, by contrast, aims to solve a specific problem. Divergent thinking is creative, open-ended thinking aimed at generating fresh views and novel solutions.

Guidelines for Divergent Thinking:

- **Defer Judgment.** Deferring judgment isn't the same as having no judgment. It just means "hold off for a while" and avoid judging ideas as either bad or good in this phase.
- **Combine and Build.** Use one idea as a springboard for another. Build, combine, and improve ideas.

- **Seek Wild Ideas.** Stretch to create wild ideas. While these may not always work, getting way outside the box provides the space to discover extraordinary ideas.
- **Go for Quantity.** Take the time necessary and use the tools in this guide to generate a long list of potential options. To make it easier to generate a long list, set a concrete goal such as at least 50 ideas in seven minutes for groups, or 30 ideas in seven minutes if solo, before going to the next step.



NANO: CREATING A CUSTOMER VALUE PROPOSITION

It's not possible to invent or reinvent a business model without first identifying a clear customer value proposition. Often, it starts as a quite simple realization. Imagine, for a moment, that you are standing on a Mumbai road on a rainy day. You notice the large number of motor scooters snaking precariously in and out around the cars. As you look more closely, you see that most bear whole families—both parents and several children. Your first thought might be, “That’s crazy!” or “That’s the way it is in developing countries, people get by as best they can.”

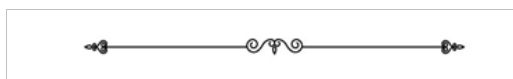
When Ratan Tata of Tata Group looked out over this scene, he saw a critical job to be done: Provide a safer alternative for scooter families. He understood that the cheapest car available in India cost easily five times what a scooter did and that many families could not afford one.

In the middle of difficulty
lies opportunity

Albert Einstein

Highly creative people are practical thinkers. Not only do they come up with more ideas, they come up with more good ones, too. They don't mistake possibilities for probabilities because through time and experience anything is possible. Tata saw a great opportunity and was able to find a solution by offering an affordable, safer, all-weather alternative for scooter families. This was a powerful value proposition, one with the potential to reach tens of millions of people who were not yet part of the car-buying markets. Ratan Tata also recognized that Tata Motors' business model could not be used to develop such a product at the needed price point and so in 2008 Nano car was born—an inexpensive rear-engine hatchback intended to appeal to current riders of motorcycles and scooters, with a launch price of \$2,500 USD.

The purchase price of the Nano was reduced by eliminating nonessential features, reducing the amount of steel used in its construction, and relying on low-cost labor. The launch earned media attention and the Nano received much praise for its low price and status as “The People's Car.”



12

CONVERGENT THINKING

At certain points in the creative process, thinking and focus needs to shift. To select the best of our divergent options, determine their potential value. In the convergent thinking process, choice is deliberate and conscious. Criteria are purposefully applied as we screen, select, evaluate, and refine the options, all while knowing that raw ideas still need development.

When it's time to make decisions about the ideas generated by divergent thinking, Scott Isaksen, PhD, and Don Treffinger, PhD, proposed these convergent thinking guidelines in *Creative Problem Solving, the Basic Course* (1982).

- **Be Deliberate:** Give decision-making the time and respect it requires. Avoid snap decisions or harsh judgments. Give every option a fair chance.
- **Check Your Objectives:** Verify the choices against your objectives in each step. This is a reality check—are the choices on track?
- **Improve Your Ideas:** Not all ideas are workable solutions. Even promising ideas must be honed and strengthened. Take the time to improve your ideas.

- **Be Affirmative:** Even in convergence, it's important to first consider what's good about an idea and judge it for the purpose of improving, rather than eliminating, ideas.
- **Consider Novelty:** Do not dismiss novel or original ideas. Consider ways to tailor, rework, or tame.



BUILT TO SERVE

Uber started as a simple idea: What if you could request a ride from your phone? But what began as a novel thought quickly grew into a global brand focused on helping move you toward opportunity out in the world. Here's a peek into the company's origin story:

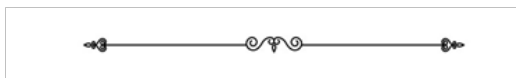
December 2008; On a cold winter evening in Paris, Travis Kalanick and Garrett Camp couldn't get a ride. That's when the idea for Uber was born.

March 2009; The two entrepreneurs developed a smartphone app that gave people the power to tap a button and request a ride.

July 5, 2010; The first Uber rider requested a trip across San Francisco.

December 2011; Uber launched internationally in Paris, the same city where the idea was born three years earlier.

In the present days, in addition to helping people get from point A to point B, Uber is working to bring the future closer with self-driving technology and urban air transport, helping people order food quickly and affordably, removing barriers to healthcare, creating new freight-booking solutions, and helping companies provide a seamless employee travel experience. That's the reason I love to call it *Built to Serve*.



13

DISRUPTIVE INNOVATION

In a December 2015 article for the *Harvard Business Review*, Clayton Christensen with co-authors Michael Raynor and Rory McDonald set out to clear up confusion over the meaning of disruptive innovation. They explained that “disruption” describes a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses. Specifically, as incumbents focus on improving their products and services for their most demanding (and usually most profitable) customers, they exceed the needs of some segments and ignore the needs of others. Entrants that prove disruptive begin by successfully targeting those overlooked segments, gaining a foothold by delivering more suitable functionality, frequently at a lower price. Incumbents, chasing higher profitability in more demanding segments, tend to not respond vigorously. Entrants then move upmarket, delivering the performance that incumbents’ mainstream customers require, while preserving the advantages that drove their early success. When mainstream customers start adopting the entrants’ offerings in volume, disruption has occurred.

Disruptive innovations are made possible because they get started in two types of markets that incumbents overlook: *low-end footholds* and new-market footholds. Low-end foot-

holds exist because incumbents typically try to provide their most profitable and demanding customers with ever-improving products and services, and they pay less attention to less demanding customers. In fact, incumbents' offerings often overshoot the performance requirements of the latter. This opens the door to a disrupter focused (at first) on providing those low-end customers with a "good enough" product.

In the case of *new-market footholds*, disrupters create a market where none existed. Simply put, they find a way to turn nonconsumers into consumers. For example, in the early days of photocopying technology, Xerox targeted large corporations and charged high prices in order to provide the performance that those customers required. School librarians, bowling-league operators, and other small customers, priced out of the market, made do with carbon paper or mimeograph machines. Then in the late 1970s, new challengers introduced personal copiers, offering an affordable solution to individuals and small organizations—and, thus, a new market was created. From this relatively modest beginning, personal photocopier makers gradually built a major position in the mainstream photocopier market that Xerox valued.

A disruptive innovation, by definition, starts from one of those two footholds. There are outliers: Uber, the much-feted transportation company whose mobile application connects consumers who need rides with drivers who are willing to provide them, did not originate in either one. Founded in 2009, Uber has enjoyed fantastic growth and it is difficult to claim that the company found a low-end opportunity—that would have meant taxi service providers had overshot the needs of a material number of customers by making cabs too plentiful, too easy to use, and too clean. Neither did Uber pri-

marily target nonconsumers—people who found the existing alternatives so expensive or inconvenient that they took public transit or drove themselves instead. Uber was launched in San Francisco (a well-served taxi market), and Uber’s customers were generally people already in the habit of hiring rides.

While disrupters typically *start* by appealing to low-end or underserved consumers and then migrate to the mainstream market, Uber has gone in exactly the opposite direction, building a position in the mainstream market first and subsequently appealing to historically overlooked segments. Uber has quite arguably been increasing total demand—that’s what happens when you develop a better, less-expensive solution to a widespread customer need.





INNOVATION

**“I am a Day Dreamer
and a Night Thinker.”**

- Unknown

1

WHAT IS INNOVATION?

Innovation is an act of implementing something new, or it can simply be defined as turning “creativity into reality.” It is a process of transforming unique, creative ideas into new realities, which may turn into greater benefits, depending on their impact on the business organization, government, and society.

Innovation is a hot topic in business magazines, training and development programs, and thought leadership. Why? There are several reasons, one being that the market place is flattening and customers have become accustomed to high-quality innovative products and services.

INNOVATING FOR THE FUTURE

Mastering innovation is a strategic imperative. Peter Druker said, “The enterprise that does not innovate ages and declines. And in a period of rapid change such as the present, the decline will be fast.” Innovation is a growth multiplier. Millennial companies have claimed that innovation is a definitive driver of rapid and profitable revenue growth. In fact, they consider it a “competitive necessity” for their organizations. According to PwC’s 2013 study “Unleashing the Power of Innovation,” 74 percent of CEOs regard innovation as equally

important to the success of their company as operational effectiveness, if not more. This is the *first* time in recent history that innovation has been on a par with operations in the C-suite.

A misconception is that innovation is only about introducing a new product. but we can innovate our customer services, partnerships, business models, marketing methods, and more. Indeed, opportunities for innovation exist at all levels in many ways. So stop restricting yourself and let your ideas come into reality. The world is in search of creative and innovative people. What is stopping you from starting?



BITCOIN

While I was writing this page there is one digital currency that comes to mind that has become very well known in innovation circles; it's the Bitcoin (BTC). It is a consensus network that enables a new payment system and a completely digital currency. Powered by its users, Bitcoin is a peer-to-peer payment network that requires no central authority to operate. On October 31, 2008, an individual or group of individuals operating under the pseudonym "Satoshi Nakamoto" published the BTC Whitepaper and described it as "a purely peer-to-peer version of electronic cash, which would allow online payments to be sent directly from one party to another without going through a financial institution."



2

SHAPE A NEW FUTURE

Innovation isn't just having a few bright ideas; it's about creating value and helping organizations continuously adapt and evolve. In 2019, ISO (the International Organization for Standardization) developed a new series of International Standards on innovation management. ISO is a worldwide federation of national standards bodies (ISO member bodies), and the work of preparing International Standards is normally carried out through ISO technical committees.

Innovation is an increasingly important contributor to the success of an organization, enhancing its ability to adapt in a changing world. Novel and innovative ideas give rise to better ways of working, as well as new solutions for generating revenue and improving sustainability. It is closely linked to the resilience of an organization, in that it helps the company understand and respond to challenging contexts, seize opportunities that innovation might bring, and leverage the creativity of both its own people and those it deals with.

Ultimately, big ideas and new inventions are often the result of a long series of little thoughts and changes, all captured and directed in the most effective way. One of the most efficient ways of doing just that is through implementing an innovation management system.

An innovation management system provides a systemic approach to integrate innovation into all the layers of an organization in order to seize and create opportunities for the development of new solutions, systems, products, and services. According to the official webpage of ISO, the first International Standard for such systems has just been published:

ISO 56002, *Innovation management — Innovation management system — Guidance*, covers all aspects of innovation management, from how to generate those first sparks of an idea to selling something new in the marketplace. It considers the context that an organization is working in, the culture, strategy, processes, and impact. It crosses many types of activities including products and services, business models, organizational innovation, and more, and is applicable to all types of organization, regardless of size or type.

Alice de Casanove, Chair of the ISO technical committee who developed the standard, says ISO 56002 will help organizations increase business opportunities and their performance in a multitude of ways:

“Every organization that wants to master their future needs to incorporate some aspects of innovation management. That is, they need to evolve and adapt to keep up with market and societal trends,” she says.

“The challenge is to identify what will give them the competitive edge and create value for the future, and thus which strategic actions to take. By providing guidance on how to best capture their ideas, test them effectively, and manage the risks and opportunities associated, ISO 56002 can help organizations create new value propositions and maximize their potential in a structured way.”

ISO 56002 can also help to instil a culture of innovation in an organization, adds de Casanove, thereby harnessing the creativity and motivation of every member of the organization and ultimately improving the company's collaboration, communication, and performance.



3

INCREMENTAL INNOVATION

Recently business schools worldwide began to include incremental and radical innovations in their curriculum. What is so unique about this? Let's look to innovations based on the views of the Design Council UK, an independent charity and the government's advisor on design. The Design Council UK works with the world vision that the role and value of design is recognized as a fundamental creator of value, enabling happier, healthier, and safer lives for all.



INCREMENTAL INNOVATION

Finding big ideas in a crowded space

Looking at an existing market or product and finding an opportunity to make an improvement to the way it looks or works is the bread and butter of design. For market leaders, it's a necessity to staying ahead, as design can be used to attract a new user group or differentiate a product by making it easier to use.

The advantages of the incremental innovation process are threefold:

1. STAYING COMPETITIVE

Every next-generation product needs to compete; it's a must. Products need to evolve to allow competition with the previous generation to roll on.

2. IDEAS ARE EASIER TO SELL

You are offering a recognizable product to an existing market, therefore it makes it so much easier to communicate and sell your big idea.

3. AFFORDABILITY

The process of incremental production allows for affordable development. Products can be made better without breaking the bank.

Of course there are disadvantages to focusing on smaller, more prudent design innovations—getting noticed in a crowded and noisy marketplace can be tough and there is the challenge of creating a genuinely differentiated, improved offering. The question to ask is how different is your product *really*? Also, brands are never alone; competition is high playing the same game, for the very same reasons.

The real opportunity in this process of innovation is for design to start with the *need*, not the solution. If you build your big ideas from the need, incremental innovations will follow.

Here are some successful stories covering incremental innovation.

The Joseph Elevate collection is a really good example of incremental innovation with its unique twist on an existing design. This company has built an empire on clever, yet sim-

ply designed, kitchen products. Their adaptation of everyday kitchen utensils has resulted in not one but a whole family innovative new products.

Another incremental innovation success story is the new Bouroullec Serif TV for Samsung Designed by Ronan & Erwan Bouroullec. Love it or hate it, Samsung added a new layer of desirability to an existing product by turning a generic flat screen TV into a piece of furniture. The Serif is designed to be portable and with minimum clutter and maximum ease, you can place your Serif anywhere in the room—on the stand or even a table—for any occasion. Its unique I-shaped profile is sharper and more sophisticated than ever, giving it a completely different look than any other TV. It's the very definition of minimalism design that's created to elevate your room's aesthetic. Your screen doesn't have to be black when it's turned off. A range of choices and settings make it simple to transform your TV screen and use it in different ways, like Ambient Mode, which serves up beautiful images and useful information.

Finally, it's worth it to mention Ayca Dundar, a Design Council Spark finalist and inventor of the Pop Umbrella—a retake on the traditional umbrella design by being flexible and less likely to break. Pop Umbrella's sustainable design consists of only six parts and has a supple structure, so it flexes during strong winds. It also closes into a compact flat disk for ease of transport. All in all, Ayca hopes Pop Umbrella will result in fewer lost and broken umbrellas on the streets on rainy days.



4

RADICAL INNOVATION

FINDING BIG IDEAS THAT MAKE SENSE

This approach is larger scale—it disrupts both context and purpose. Radical innovation is changing the way we think and it can lead to the creation of new markets and industries.

A great example of radical product innovation is the Pebble smart watch. Bursting onto the market via Kickstarter in 2012, the technology and its application created a whole new category long before Apple joined in with the launch of their Apple Watch, three years later.

Another product innovator that follows the radical approach is Dyson. They have gone through the process of reinventing often-overlooked categories of domestic appliances such as the vacuum and fan. They have delivered market disruption not only through technology, but also through their business model.

So, what's the reward of radical innovation?

1. BIGGER WINS

The chance of getting a 'bigger win' is one of the main advantages of radical innovation.

2. MARKET OWNERSHIP

With an entirely innovative idea comes the chance to create a whole new brand and market—a market so untapped that a single design could gain a monopoly.

3. MORE ACCESSIBLE TO NEW PLAYERS

The radical model suits new players far better, as they have no incumbent history that can restrain the breadth of their innovative design—they have a blank, limitless canvas. With Kickstarter allowing new and exciting inventors to launch into a large marketplace, radicals will continue to wow the world with products we didn't even know we needed.

However, timing is everything with radical product innovation. If timed well it can be the perfect fit, but if a product comes out too early there is a chance people will not get it, let alone want it. Also, technology is often underdeveloped, causing slow market adoption.

Another consideration is that to develop the technology to match the potential of the product, substantial investment must be made. Radical innovation, as impulsive as it sounds, is in fact the longer game to play in terms of returns. Markets can be slow to grow when time framing and exploring an idea.

Nonetheless, radical exploration and subversion of existing product categories that are often overlooked can result in huge success—who wouldn't want to be the next Dyson?

The time has come. Designers have a choice to make: Are you for the incremental approach or are you a radical?





THE DIFFERENCE BETWEEN CREATIVITY AND INNOVATION

**“Innovation is creativity
with a job to do.”**

- John Emmerling

1

THE DIFFERENCE BETWEEN
CREATIVITY AND INNOVATION

I spend more than sixty days a year chatting with business leaders and managers about the single greatest challenge they face in the new, fast- moving economy: Winning the innovation game.

After most of my presentations and workshops, I am frequently asked about the difference between creativity and innovation. My answer is always the same: There is no innovation without creativity. People sometimes get confused between creativity and innovation so let's begin with some fundamentals and very simple definitions, which can help us easily differentiate between the two.

Creativity is the ability to think of something new, whereas *innovation* means executing creative ideas or implementing something new.

Bearing in mind this basic difference, we can further differentiate the two using an example: Suppose you are working on a project and you come up with a fresh new idea to execute the project. That is creativity (your mind's ability to think and create some new ideas), but it is not an innovation until the idea is implemented.

Furthermore, creativity is the act of generating unique ideas, whereas innovation could be introducing something better into the market. There is no risk in creativity because it is a virtual (or thought?) process, however there is always risk in innovation because it is reality. For many leaders, this is uncomfortable territory because, by definition, innovation means trying something new and accepting the risk that it may not work out.

There is no doubt that innovation is inherently risky, and getting the most from a portfolio of innovation initiatives is more about managing risk than eliminating it. Since no one knows exactly where valuable innovations will emerge, and searching everywhere is impractical, do not push yourself too hard—the best ideas show up when you are relaxed and aiming for excellence. That is it!



CREATIVITY IS NOT INNOVATION

I read the *Harvard Business Review* quite often to keep myself up to date with what's going on in the business world and to look for time-honed best practices that stand out from the pack. This time, I found something that totally justifies and shines a light on my above-mentioned belief: "Creativity is not innovation."

In August 2010, Harvard surveyed thousands of executives in Fortune 500 companies to rate their companies' innovation skills on a scale of 1 to 10: 1 being poor and 10 being world class. The survey participants overwhelmingly believed that their companies were better at generating ideas (average

score of 6) than at commercializing them (average score of 1). So, which is more effective: Improving your (already good) creativity score from 6 to 8 or increasing your (very poor) execution score from 1 to 3?

It is no contest. Companies tend to focus far more on improving the front end of the innovation process—creativity—but the real leverage is in the back end.

Ideas will only get you so far. Consider companies that struggled even after a competitor entered the market and made their great idea transparent to all. Did Xerox stumble because nobody noticed that Canon had introduced personal copiers? Did Kodak fall behind because they were blind to the rise of digital photography? Did Sears suffer a decline because they had no awareness of Wal-Mart's new everyday low-price discount retail format? In every case, the ideas were there. It was the follow-through that was lacking. In fact, Harvard's research found that innovation initiatives face their stiffest resistance *after* they show hints of success, begin to consume significant resources, and clash with the existing organization at multiple levels—that is, long after the idea generation stage.



CREATIVITY FUELS INNOVATION

Thomas Edison, the greatest innovator of all time, put it well: “Innovation is 1 percent inspiration and 99 percent perspiration.” Reflect on how much time your organization spends on inspiration versus perspiration. What are the barriers to execution? How are you attempting to overcome them?

BARRIERS TO INNOVATION

The following quote from Thomas J. Watson Jr., the Former IBM chairman and CEO, gives me encouragement: Watson was asked in an interview, “How long does it take to achieve excellence?” Watson snapped back, “A minute! You achieve excellence by promising yourself right now that you will never again knowingly do anything that is not excellent—regardless of any pressure to do otherwise by any boss or situation.”

In November 2006, IBM Global Business Services published a report that mentioned five barriers to innovation: inadequate funding, risk avoidance, siloing, time commitments, and incorrect measures.

While each of these barriers can be formidable, they don't need to stop your innovation. Successful innovators use a number of techniques to work their ways around these barriers or break right through them. Let's have a closer look.

Barrier #1: Inadequate funding. Getting the start-up funds for an innovation project often means taking money away from an established program. Getting the money at just the right time is also problematic since organizations often work on annual funding cycles that don't match up well with real-world opportunities. And, often, excellent innovation needs more than seed money to survive and before it is starved out of existence. But broader thinking on needs and resources can help innovators move their ideas along.

Barrier #2: Risk avoidance. Most of us won't run toward risks. We want to maintain our health, wealth, and peace of mind. But no progress is made without calculated risk taking. Since people know that innovation is risky, many people run away

from it. In fact, some organizations habitually play the game of finding things that could go wrong. Many of the classic responses, “We’ve never done this before” or “This failed when we tried it before” come up almost as a reflex. Once risks are identified, innovation is often stopped. But a clear-eyed view of risks balanced against benefits can create an environment where innovation is nurtured rather than killed.

Barrier #3: Siloing. Organizations seek to protect their creative identities, get proper credit, sustain themselves, and protect themselves. That’s why they create boundaries, assign responsibilities, and put rules in place. No matter how artificial the divisions and processes are, they are usually defended, even when ignoring them is to everyone’s advantage.

By nature, innovations tend to cross boundaries and create new categories. It’s not unusual to see competing claims of ownership and disputes about authority. Deals break down over who will run things and how imagined profits will be divided. As a result, innovations that might benefit the whole enterprise are killed by organizations that don’t benefit themselves, don’t see their benefits, or don’t get a “fair share” of benefits. But a better understanding of the needs and concerns of organizations can be a starting point for managing the natural organizational conflicts innovation creates.

Barrier #4: Time commitments. Time is a scarce and precious commodity. One of management’s jobs is to verify that minutes are productively filled. And while enlightened management will invest some of workers’ on-the-job time in education, experimentation, relationships, personal growth, and health, it’s difficult to prove that such investments pay off. Even worse, such investments may not pay off in a timely way

for a sponsoring organization (for example, quick enough for returns to be apparent through a quarterly measurement)... But increasing the value, benefits, and urgency of innovation will tend to free up time for work on it.

Barrier #5: Incorrect measures. For many organizations, revenue, profits, and market share are the only measures used. These are easier to quantify than intangibles such as reputation, knowledge, attractiveness to talent, leadership, and other assets that make major contributions to the true value of an enterprise.

Most innovations that matter are difficult to explain in terms of return on investment (ROI). Even those innovations that have the potential to disrupt or create new markets may suffer by comparison when put up against more pedestrian projects as they grind through a standard budgeting process. But by expanding the view of measures and including decision makers in the process of creating new measures, it's often possible to avoid the ROI trap.



2

**WORLD CREATIVITY AND
INNOVATION DAY**

The mission (or objective or inspiration) of World Creativity and Innovation Day (#WCID), an initiative by the UN, is to encourage creative multidisciplinary thinking to help us achieve the sustainable future we want. #WCID was first commemorated in more than 50 countries around the world on April 21, 2002. In 2006, #WCID became a week (#WCIW April 15 to 21) to give people ample time to explore diverse points of view. April 15, the first day of #WCIW, is also the birthday of Leonardo da Vinci, an icon of cross-disciplinary creativity in the arts and sciences, who exemplified how these fields can inform and enhance each other.

WEALTH OF NATIONS

The true wealth of nations in the 21st century arises from creativity and innovation, at both the individual and group levels, according to the findings of the special edition of the Creative Economy Report “Widening Local Development Pathways,” co-published by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the UN Development Programme (UNDP) through the UN Office for South-South Cooperation (UNOSSC).

CREATIVITY AND CULTURE

The creative economy, which includes audiovisual products, design, new media, performing arts, publishing, and visual arts, is a highly transformative sector of the world economy in terms of income generation, job creation, and export earnings. Culture is an essential component of sustainable development and represents a source of identity, innovation, and creativity for the individual and community. At the same time, creativity and culture have a significant non-monetary value that contributes to inclusive social development and to dialogue and understanding between people.

ECONOMIC GROWTH STRATEGIES

Cultural and creative industries should be part of economic growth strategies, according to the UNESCO report on culture and sustainable development. These industries are among the most dynamic sectors in the world economy, generating \$2.25 billion in revenue and 29.5 million jobs worldwide. In that spirit, countries are harnessing the potential of high-growth areas of the market for economic returns and poverty alleviation.

NEW MOMENTUM

On #WCID, the world is invited to embrace the idea that innovation is essential for harnessing the economic potential of nations. Innovation, creativity, and mass entrepreneurship can provide new momentum for economic growth and job creation. It can expand opportunities for everyone, including

women and youth. It can provide solutions to some of the most pressing problems such as poverty eradication and the elimination of hunger.





UAE NATIONAL INNOVATION STRATEGY

“Human beings, their ideas, innovations, dreams, and connections are the capital of the future. Because where great minds go today, great things will happen tomorrow.”

- H.H. Sheik Mohammed bin Rashid al Maktoum

1

UAE NATIONAL INNOVATION STRATEGY

In October 2014, His Highness Sheikh Mohammed bin Rashid Al Maktoum, vice president and prime minister of the UAE and ruler of Dubai, launched the UAE National Innovation Strategy with the aim of making the UAE one of the most innovative nations in the world within seven years. His Highness made a very important announcement that day: “We invite all research institutions around the world to participate in a competition of \$1 million USD to be awarded to people who can find sustainable, cheap, and innovative solutions.”

Below are some of the details of strategy from the official UAE government page (<https://uaecabinet.ae/en/the-national-strategy-for-innovation>) that I would like to share with my dear readers.

The strategy consists of four tracks:

TRACK 1: ESTABLISH A STIMULATING ENVIRONMENT FOR INNOVATION IN THE FORM OF SUPPORTIVE INSTITUTIONS AND LAWS

This track will shape specialized entities such as innovation incubators as well as technological infrastructure to fuel innovation in all sectors. It will also focus on research and development in various innovation fields.

TRACK 2: DEVELOP GOVERNMENT INNOVATION BY INSTITUTIONALIZING INNOVATIVE PRACTICES WITH THE SUPPORT OF AN INTEGRATED SYSTEM OF MODERN TOOLS

The strategy requires all government entities to reduce spending by one percent and dedicate the savings to research and innovation projects. National training and education programs on innovation will also be launched.

TRACK 3: ENCOURAGE PRIVATE SECTOR INNOVATION BY STIMULATING COMPANIES TO ESTABLISH INNOVATION AND SCIENTIFIC RESEARCH CENTERS, ADOPT NEW TECHNOLOGIES, AND DEVELOP INNOVATIVE PRODUCTS AND SERVICES

The UAE will attract pioneering international firms in key innovation sectors, establish innovation communities and zones, and support applied research in areas of national priority. It will also enhance the UAE's position as an international center to test innovations.

TRACK 4: PREPARE INDIVIDUALS WITH HIGHLY INNOVATIVE SKILLS BY CONCENTRATING ON SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS, INCLUDING THE CREATION OF EDUCATIONAL MATERIAL FOR SCHOOLS AND UNIVERSITIES

The aim is to establish a national culture that encourages innovation and entrepreneurship through partnerships between the public, private, and media sectors.

The framework for the strategy is structured around the following three key pillars:

PILLAR 1: AN INNOVATION-ENABLING ENVIRONMENT

The strategy seeks to develop an environment that promotes and enables innovation by developing the right regulatory framework, providing comprehensive enabling services, enhancing the technology infrastructure, and ensuring the availability of investments and incentives.

PILLAR 2: INNOVATION CHAMPIONS

The strategy seeks to create innovation champions in individuals, companies, institutions, and government.

PILLAR 3: INNOVATION PRIORITY SECTORS

The strategy targets stimulating innovation in these seven sectors:

- renewable energy
- transportation
- education
- health
- technology
- water
- space



2

UAE INNOVATION MONTH

The first UAE Innovation Week Festival was held in November 2015, and it included more than 100 activities in each of the seven emirates in UAE to celebrate innovation across the country from the government and private sectors, as well as from the public. The festival attracted various segments of society, such as students and young people, citizens, residents, visitors, and government employees. During the launch of Innovation Week, His Highness Sheikh Mohammed said, “Innovation offers a new method of functioning for UAE’s vital sector. We will assess the progress achieved in the adoption of this method through the UAE Innovation Week. We have multiplied our investments in innovation, especially in terms of equipping and training our national cadres, because keeping pace with the rapid changes taking place in the world requires innovative cadres and an environment that supports innovation.” He also added, “Our government agencies are racing to come up with creative ideas as part of the UAE’s approach of innovation.”

Sheikh Mohammed stated that the UAE government has gone through phases of development by establishing quality and excellence criteria and performance evaluations, and by providing online and smart services in every field. He highlighted the importance of innovation, saying, “If the govern-

ment succeeds in providing the best innovation environment for its staff, we can provide a better future for our citizens.”



Following the success of UAE Innovation Week 2015 and 2016, UAE Innovation Month was announced to celebrate “innovation” across the nation. The month-long festival aims to:

- Help strengthen the country’s position as a global hub for innovation.
- Enhance the development of innovative ideas and capabilities, and create a widespread culture of innovation.
- Celebrate innovation in the UAE and support the national innovation strategy.

UAE Innovation Month is one of the largest innovation festivals in the world and this consolidated effort by government, the private sector, and individuals helps to create a widespread culture of innovation in the UAE.



3

TAKAMUL

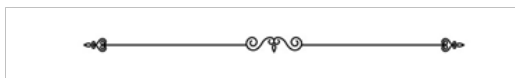
Launched in 2011, *Takamul* is a UAE innovation program to support inventors and promote innovation across the country. Takamul (meaning “integration” in Arabic) describes the “integral” mathematical operation. In mathematics, an integral represents the sum of results for an equation between two points.

Similar to its mathematical namesake, the Takamul Program’s ultimate mission is to facilitate the integration of each stage of the innovation cycle between the starting point (generating ideas) and the end state (the practical application of these ideas through innovative products, solutions, and services). This is illustrated in the program’s logo—an integral sign that begins with ideas (colored in grey) and transitions into application (colored in red).

Takamul focuses on making UAE one of the most innovative countries in the world by promoting the innovation cycle, from the generation of ideas to the practical implementation of these ideas into commercial activities that support the country economically and socially.

In mature, knowledge-based economies, innovation in the science and technology industries has contributed significantly to their economic growth. Takamul is aligned with

Abu Dhabi's Economic Vision 2030 to drive human capital in science and technology by helping inventors and innovators of every age turn their dreams into reality.



4

MOHAMMED BIN RASHID INNOVATION FUND

The Mohammed bin Rashid Innovation Fund is a federally sponsored initiative conceived and sponsored by the Ministry of Finance UAE to support *local* innovators in accessing affordable finance through the provision of a government-backed guarantee. The Fund works with local innovators to facilitate innovation activities through targeted financial risk mitigation and business development tools aimed at sustainable growth. The targeted vision of the Innovation Fund is to:

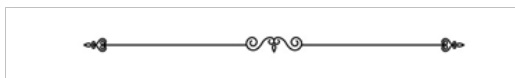
- Bridge the financing gap across innovation projects.
- Commercially accelerate the UAE's innovative products and services in regional and international markets.
- Promote the UAE's reputation and footprint on the international innovation scene.
- Improve the UAE's economic competitiveness and expand its national growth potential.
- Stimulate public-private collaboration in innovation.

The Fund's holdings of \$544 million USD was announced in November 2015 during the UAE's inaugural Innovation

Week, which sought to showcase a variety of innovative initiatives across federal and local levels of government and within the private sector.

The Fund will act on behalf of the UAE government to provide a guarantee as security to a financier as an incentive to encourage the issuance of a loan and to reduce collateral required from the applicant. It is the path to making the UAE a leader in innovation and improving the quality of life for people in the UAE and the world.

I feel fortunate enough to be a citizen of this great country, working under great authentic leadership, which promotes innovation in almost every possible area to create a better tomorrow for all.



5

INNOVATION IN EDUCATION

On January 17, 2017, His Highness Sheikh Dr. Sultan bin Muhammad Al Qasimi, member of the Supreme Council and ruler of Sharjah and president of American University of Sharjah (AUS), met with Kai Mykkänen, the minister for foreign trade and development of Finland, at the Al-Badya palace in Sharjah. I was personally invited to attend the meeting, the purpose of which was to discuss the future development plans of the university and the establishment of the Research, Technology, and Innovation Park by AUS Enterprises (AUSE) adjacent to University City and the signing of a Memorandum of Understanding (MoU) between AUSE and the Council of Oulu Region (Northern Ostrobothnia, Finland). The five-year agreement was signed to facilitate mutual cooperation in the fields of research and development; improvement of innovation in education, trade, science and technology, business; and industrial development in Sharjah and the Oulu region with both party administrations sharing experiences.

Hussain Al Mahmoudi, CEO of AUSE, said, “His Highness the ruler of Sharjah discussed with the visiting minister several ways of collaboration that would enable Sharjah and Finland to benefit from each other’s expertise and knowledge, whether it be in research and development or business and

commerce. Some of the ideas that were discussed were potential partnerships between private sector entities in the fields of technology and entrepreneurship and the potential establishment of a Finland innovation center at the Research, Technology, and Innovation Park.”

I must say that this great effort taken by both parties could foster a significant and positive change to traditional education through innovation.



6

UAE's MOST RECOGNIZED CHILD INVENTOR

Eleven-year-old Emirati inventor Adeeb Al Balushi is on a mission to save and improve people's lives through innovation. From a very early age, he has been getting recognition for his awesome inventions. It was a trip to the beach that sparked Adeeb's inventing career, when his father, who had suffered from polio, could not go swimming because of his prosthetic leg. Adeeb, then six, made his father a waterproof alternative using an enhanced medical wax coating. That was his very first invention, and then, soon after, he created a small vibrating robot to help his mother clean small spaces. Awesome job! His inventions did not take much time before they grabbed the attention of the media, which led the Dubai government to subsequently contact him.

With the government's supervision and funding, Adeeb has come up with more inventions since then, including a seat belt that monitors a passenger's heart rate and alerts the authorities when it is too high or low, a fireproof helmet with a camera system to help the person see during emergency, and a smart wheelchair for the disabled. At a very young age, he is doing so much in the field of innovation, which is truly worth appreciating.

In November 2014, he addressed 3,000 delegates at the International Telecommunication Union conference in Busan, Korea. He is one of the youngest inventors in the world and was given the Hamdan bin Rashid Al Maktoum Award for Distinguished Academic Performance. Adeeb was also featured on CNN for his wonderful inventions.

Last year, I had the chance of meeting and recognizing Adeeb during our monthly progress meeting at SEWA under the theme of *innovation for a better tomorrow*. I saw great motivation and inspiration in his personality to make a difference in people's lives through innovation. During the gathering, he was with his parents, who commented that Adeeb, since his early childhood, loves to make and break the toys they give him to create something new out of them.

Since April 2014, he has been on an international scientific tour with the Emirates Institution for Advanced Science and Technology, which has had him attending academic conferences, meeting with researchers, and even attending a space camp at the US Space and Rocket Center in Alabama. He was quoted as saying, "I've learned a lot, but most importantly, I'm having fun while doing it."

On April 4, 2017, the University of Manchester, UK; honored Adeeb and his younger sister Dana, 11, for their scientific achievements in the fields of medical sciences and space sciences.

Adeeb and Dana are the first and youngest students to discuss scientific research on full-scale projects at the National Graphene Institute at the University of Manchester, impressing the institute's management for their considerable research, logic, and scientific qualities.



7

FIRST EMIRATI FEMALE INVENTOR

I am proud to write about the first female Emirati inventor, Reem Al Marzouqi, who received a bachelor's degree in architectural engineering from United Arab Emirates University and has a US patent for her original invention, a "lower extremity vehicle navigation control system." Her invention is basically a car that can be driven without hands, and the idea for this system came into her mind when she was watching an interview with the world's first licensed armless pilot, Jessica Cox, where she mentioned the difficulties that she faces when driving cars for long distances using only her feet.

Dr. Haik, a professor at the College of Engineering, said, "Reem has realized the difficulty faced by people who suffer from either temporary or permanent disabilities. Further, she has provided them with an option to drive with a steering lever, acceleration lever, and a brake lever to enable the car to be controlled solely with the driver's feet with a high level of control and flexibility. The machine was tested in a parking area, and the results were interesting and encouraging." She said, "The car fitted with the system is not only beneficial for those with disabilities but can also be used in peacekeeping operations, industrial situations where the driver is required to use hands for other operations, or for military exercises."

So, Reem, together with her team, designed a system for a good cause. I must say that it also is a remarkable step towards humanity through creative and innovative thinking. Well done, Reem. Keep challenging tomorrow. See you at the top always. God bless you!



8

The First Emirati to Become a Theoretical Physicist

Emirati physicist Ahmed Almheiri has won a prestigious scientific award for his study of black holes in space.

Almheiri and his research team were among the new scientists who received the \$100,000 New Horizons Prize presented by The Breakthrough Prize Foundation, dubbed the “science Oscars.” The Breakthrough Prize Foundation is considered one of the most significant scientific awards in the world. Every year, the New Horizons in Physics Prize, which was founded by Yuri Milner, a science and technology investor and philanthropist, is awarded to researchers who have produced important work in science. It has awarded more than \$250 million to 3,000 scientists since its inception in 2012.

Al Muhairi is currently doing his postdoctoral studies in physics at the Institute for Advanced Study (IAS) at Princeton University. The institute was established in 1930 with esteemed physicist Albert Einstein as one of its first professors.

Almheiri, who is also a long-term member of the School of Natural Sciences, coauthored a paper in 2012 that confounded theoretical physicists, garnered attention from The New York Times and Scientific American, and prompted the orga-

nization of various workshops and the publication of dozens of papers around the world.

The paper, “Black Holes: Complementarity or Firewalls?” gives an explanation of Stephen Hawking’s black hole information paradox of 1974, which showed that black holes radiate particles, known as Hawking radiation, as they shrink in size and eventually evaporate completely.

Almheiri was born and raised in Abu Dhabi, UAE. He is the second youngest of a large brood of three brothers and nine sisters. His mother never received a formal education; however, his father, who had earned a degree, became one of the founders of the UAE Red Crescent and its first chairman of the board of directors. His father is now retired and tends to the family farm.

In a biography published by the IAS, Almheiri is recognized as the first Emirati to become a theoretical physicist and member of the prestigious institute.



ACKNOWLEDGEMENTS

It's with my deepest gratitude and love that I dedicate this book to Alleem R&D center's wonderful employees. It is because of your boundless devotion, hard work, passion for our brand, and spirit of innovation that Alleem R&D continues to make people's lives better.

A book like this is not possible without the help of many others. The inspiration to write the book came from my dear family. Thank you for your support, as you are always there for me. You are an inspiration.

I am also grateful to my Alleem Research & Development Senior Officer Shabih Fatima for her advice, support, and encouragement as she has read and reviewed several draft of this manuscript.

Thank you to the entire Alleem R&D staff. I so appreciate you all. You are amazing!

Thank You to every volunteer, staff, person & leader I have had the honor and privilege to work with in my lifetime.

Finally, even though they are no longer with us, I have to thank my parents for their love and unwavering support. I wish I could have half of their character. Miss you every day and love you much.



Alleem 21 Sustainable Development Goals

By drawing examples from a number of countries, Dr. Rashid teased out the diverse, but intersecting domains of sustainability, emphasizes strategies, organizational characteristics, and personal qualities for action, and established concrete yet achievable targets for the future: Alleem's 21 Sustainable Development Goals.

The following provides an overview of the Alleem 21 Sustainable Development Goals:

GOAL 1: QUALITY EDUCATION

It is appalling to realize that nearly 103 million youth and children worldwide lack basic literacy skills, 60% of whom are women. Dr. Alleem believes firmly that education is a powerful weapon that can help change the world; however, that education must be 'Quality Education.' He states that one must learn, and once you have learnt, teach others in turn, because education is the source of true happiness. He believes that quality education will help bring remarkable developments at all levels of the system, nurturing leadership skills and literacy excellence.

GOAL 2: FOSTERING CREATIVITY AND INNOVATION

According to Dr. Alleem, creativity is the ability to develop something new, while innovation is the execution of these creative ideas. He states that every individual in this world has an exceptional gift that is consistent with his philosophy, which rests on his self-coined term, “the CRITRAL thinking.” This unique blend of “critical and lateral” thinking will not just help people achieve the best version of themselves, but also of their colleagues. He believes that although everyone is gifted or creative, the key focus remains on one’s perception.

GOAL 3: TECHNOLOGY, RESEARCH, AND DEVELOPMENT

Technology has become an indispensable part of our lives, as it pervades almost every aspect of our work as well as personal lives. Undoubtedly, without technology, life would be quite toilsome and onerous. The development of new technology today has helped people in many aspects; it not only saves lives, but also helps people make work easier, and the world a better place in which to live. Technology has opened new avenues in nearly every sector, including education, healthcare, research and energy studies, environment, and travel.

GOAL 4: PEACE AND SECURITY

The world has become chaotic since 2008, with a deterioration of 2.44 percent in the average country Global Peace Index score. Dr. Alleem believes that it is important that we educate our young generation about the Institute for Economics and Peace’s eight pillars for positive peace to create a utopian world that is filled with love, peace, and passion. These Eight pillars include a government that functions well, sound business environment, equitable distribution of resources, accep-

tance of the rights of others, good relations with neighbors, free flow of information, high levels of human capital, and low levels of corruption.

GOAL 5: TOLERANCE

Millions of people today who live in different parts of the world have been suffering from hate crimes attributable to their caste, color, and creed. Human trafficking is also on the rise and people have stopped feeling the sense of belongingness to the place in which they live. In this growing unrest, we fail to understand that tolerance is acceptance—accepting and rejoicing in differences—and undoubtedly the UAE is one of the major examples of tolerance. In 2016, it created the 1st Ministry of Tolerance in the world and also designated the year 2019 as the “The Year of Tolerance.”

GOAL 6: HAPPINESS

Over the centuries, people have agonized over the question—What is happiness? Is it simply feeling good about oneself? Being rich or being able to afford everything in life? Dr. Al-leem, who is often recognized as the Ambassador of Peace and Happiness in the Arab world, defines happiness as the feeling of being relatively content with yourself and satisfied with every aspect of your life. He has contributed immensely to the happiness of the UAE and created a motivational work environment in his organizations. Under his leadership, SEWA was recognized as one of the happiest places in which to work. He believes firmly that in addition to GDP, each country should have the GNH—Growth National Happiness, following the footsteps of Bhutan, which takes the happiness of its population as its growth policy.

GOAL 7: GOOD HEALTH AND WELL BEING

Health is an important facet of sustainable development; hence, to spread awareness of good health and wellbeing, the Alleem R&D center has organized the Rashid Alleem Premier League, or RPL, every year since 2016. This engaging tournament has gained great acceptance now by corporations. In 2020, the RPL was announced as the GCC's largest corporate cricket tournament.

GOAL 8: WATER SUSTAINABILITY

Water scarcity has reached a critical level. According to UN statistics, only 2.6 billion people have gained access to improved drinking water sources since 1990, while 663 million still have no access to it. Further, at least 1.8 billion people all over the globe use a drinking water source that is contaminated with faeces. Dr. Alleem has worked with various international organizations to find innovative and high-quality solutions for this perilous challenge that the world faces today. To spread awareness of water sustainability on a larger scale, Dr. Alleem organizes Water & Energy week, in which more than 300 participants engage every year. For his pioneering contributions to this sustainable goal, he was also bestowed with the Friend of Singapore Sustainability Award 2017 by the government of Singapore and became a member of the advisory board of the Singapore World Water Council.

GOAL 9: AFFORDABLE ENERGY

With the growing population, the demand for affordable and clean energy sources has also been on the rise. As climate change has affected energy resources, it is vital that we change our ways to achieve this sustainable goal and save our planet.

To achieve this, Dr. Alleem was able to position Sharjah globally as a city of conservation. He introduced peak hours between 02:30 to 03:30 p.m. on July 1 every year, and to spread awareness of this initiative, messages were provided through the media urging the public to avoid using appliances that consumed more power during those peak hours. SMS messages were also sent to encourage the people to contribute and participate in this initiative. They created an innovative character called Peak man for the children to take pictures and become involved in this excellent initiative. The ultimate goal of this campaign was to reduce the energy demand by 30 percent during the peak hours. Under his leadership, SEWA has set international records and is recognized proudly as one of the most authentic organizations in the world.

GOAL: 10 ENVIRONMENT AND NATURAL RESOURCE SECURITY

Understanding the direct pressures placed on the natural world, including the water crisis, climate change, and many more, companies across the globe have incorporated the “Go Green” concept as one of their organizational policies, and SEWA is not far behind. Under Dr. Alleem’s astute leadership, consistent with international standards, SEWA adopted the green bill strategy to provide easier online services to its 1.5 million customers. Since January 1, 2017, SEWA began to issue electronic rather than paper bills with the slogan “My bill is environmentally friendly.” This strategy has saved more than 600 trees per annum. To pledge its allegiance to the environment, and engage its employees to leave a legacy by planting trees, SEWA also decided to give back to the environment by planting 600 *Prosopis cineraria* trees across Sharjah.

GOAL 11: CLIMATE CHANGE

Over the past several decades, the earth's average temperature has increased by 0.750C, causing heat waves, droughts, wildfires, storms, and so on that hasn't just killed people, but animals and plants, across the globe and led to damages amounting to hundreds of billions of dollars. To contribute to global warming and climate change solutions, UAE has created a full-fledged ministry, the Ministry of Climate Change, and has signed international agreements, including the Paris agreement.

GOAL 12: FINANCIAL AND ECONOMIC CRISES

If we reminisce about history, financial crises have had profound effects on people. As it happened to our grandfathers during the great depression in 1929 and that in 2008 we have witnessed grave social effects that resulted in the loss of millions of jobs across the globe. Dr. Alleem states that during such crises, it is important that we change the way we think and work. All leaders across organizations must demonstrate steadfast integrity, maintain personal credibility, and possess the ability to confront reality. In short, we must rethink thinking—rework our work. According to him, financial and economic crises can be controlled and overcome using good, authentic leadership and quality directorial skills.

GOAL 13: COMPETITIVENESS

According to the World Economic Forum, competitiveness is the set of institutions, policies, and factors that determine the level of productivity. The 12 pillars of competitiveness that determine the level of productivity in a country include institutions, infrastructure, macro-economic environment, health

and primary education, higher education and training, goods market efficiency, labor market efficiency, a developed financial market, technological readiness, market size, business sophistication, and innovation.

GOAL 14: INTERNATIONAL TRADE AND INVESTMENT

According to Dr. Alleem, if we wish to achieve a peaceful world, a better tomorrow, and sustained global relationships, we should elevate the business bar and make better deals. One of the ways to achieve this is by creating Free Zones. The UAE has 34 free zones across its seven emirates that have been able to attract Foreign Direct Investments (FDIs) from more than 200 countries.

GOAL 15: CHILDREN'S RIGHTS

Every child in this world has the right to have continuous access to basic services and resources, such as safe water, sanitation, adequate nutrition, good health, quality education, clean air, and energy. According to the International Labour Organization, 218 million children worldwide between the ages of 5 and 17 years are employed and among them, 152 million are victims of child labor. It is important that we ensure children's rights to education, health, and protection from abuse and exploitation.

GOAL 16: FOOD SECURITY

Agriculture is the single largest employer in the world, providing livelihoods to 40 percent of today's global population. In developing countries, 500 million small farms worldwide, largely still rain-fed, provide up to 80 percent of the food consumed. It has been noted as well that energy poverty in many

regions is a fundamental barrier to addressing hunger and ensuring that the world can produce sufficient food to meet future demands. To address this issue of food security, the UAE has established a food bank to reduce food waste and feed needy people in the region and abroad. Here excess food from hotels, supermarkets, restaurants, and farms is collected, stored, and packaged for distribution. Similarly, to preserve seeds, Sharjah has initiated the Sharjah Seed bank with the goal to preserve the genetic origins of terrestrial plants through seed genes.

GOAL 17: EXTREME POVERTY

This goal is consistent with the UN's strategic vision to eradicate poverty worldwide by 2030; although global poverty rates have been reduced by more than half since 2000, one in ten people in developing regions still lives on less than US\$ 1.90 a day.

GOAL 18: WOMEN'S EMPOWERMENT

Women's empowerment and autonomy and the improvement of their political, social, economic, and health status is a highly important end in itself. The UAE believes firmly that progress on issues related to women's rights is essential to build a tolerant and modern society. Since the initial foundation of the UAE on December 2, 1971, the UAE's leaders have recognized women as equal partners in national development.

GOAL 19: EMPLOYMENT SKILLS AND HUMAN CAPITAL

While employment skills are transferrable skills that an individual requires to be employed, human capital refers to the collective skills that can be used to create economic value for

individuals, their employers, or their community to build a better tomorrow for its citizens and ensure that they have the correct and necessary skills, tools, and knowledge.

GOAL 20: SUSTAIN INCLUSIVE GROWTH

Inclusive growth signals a process by which economic growth is generated and distributed in ways that are based broadly and allows people to create economic growth. Inclusion also affects social stability and peace in a country. Hence, after extensive research, the Alleem R & D Center developed a model for inclusive growth that consists of five pillars: leadership; import knowledge; high savings; infrastructure; and financial institutions. According to Dr. Alleem, to ensure the success of the inclusive growth model and guarantee sustained growth, the following four actors' roles are important: government sector; private sector; civil society, and individuals.

GOAL 21: INTERNATIONAL COOPERATION

The final goal of the Alleem 21 sustainable development goals is International Cooperation. Through his Alleem Brilliant Networking project, Dr. Alleem has been involved with various international organizations and meets various visionary business and state leaders who are eager to collaborate and co-create to find new ways to promote the achievement of strong, inclusive, and sustainable green growth worldwide.

To achieve this ambitious and magnanimous vision, the Alleem R&D Center is proud to have collaborated with over 100 like-minded local, regional, and global brands to cooperate, co-create, and meet the Alleem 21 Sustainable Development goals.

ABOUT THE AUTHOR

Dr. Rashid Alleem is ranked third among the 25 most influential CEOs in the Gulf Cooperation Council and is considered one of the 100 most influential CEOs in the Middle East. Recently, the Academic College of Oxford, United Kingdom, honored Dr. Alleem with the title of “Honorary Professor” in recognition of his scientific, administrative, and humanitarian efforts and contributions, especially in the field of sustainable development. He is a passionate writer; an environmentalist; a sought-after thought leader; the creator of CRITICAL Thinking, a unique blend of “critical and lateral” thinking; and an internationally respected transformational leader. The founder of Alleem Knowledge Center, Dr. Alleem is a dynamic leader who has worked with prestigious governmental, semi-governmental, and nonprofit organizations. He is an entrepreneur par excellence with a flair for effective, strategic decision-making by means of innovative thinking. Dr. Rashid was recognized as “The Knowledge Ambassador of the UAE” by His Highness Sheikh Mohammed bin Rashid Al Maktoum—the Vice President and Prime Minister of the UAE and ruler of the Emirate of Dubai—and as “Environmentalist of the Year 2012” by the fourth Prime Minister of Malaysia, Dr. Mahathir Bin Mohamad.

Dr. Alleem earned a Ph.D. from the University of Salford, in Manchester, UK. Being a “sustainovationalist,” he has received five honorary doctoral degrees from different universities: Atlantic International University (USA), in recognition of his achievements in the socioeconomic fields; Somalia National University, for his humanitarian services; American Global International University (USA), for his global business contributions and numerous academic achievements; Indian Peace University, from which he received a Doctorate in Philosophy for his exceptional contributions, dedication, and social services to society; and Doctor of Philosophy (D. Phil) from Amity University, in recognition of his exceptional vision, deep commitment to the environment, professionalism and direction in the pursuit of excellence and his strategic vision and inspirational leadership in steering his organization towards continuous growth and dedication to the good of humanity.

Dr. Alleem was recently recognized as The Global Green Ambassador by DMG. Under his leadership, SEWA received the Voluntary Cancellation Certificate for excellence in energy-saving and the reduction of CO2 emissions by the United Nations Framework Convention on Climate Change (UNFCCC) in 2017. He was bestowed with the Friend of Singapore Sustainability Award 2017 by the government of Singapore, and he became a member of the advisory board of the Singapore World Water Council. He has received the prestigious title of “The Ambassador of Peace & Happiness in the Arab World” by Voice of Kerala Radio Station.

As a highly sought-after keynote speaker, presenter, and teacher, Dr. Alleem is well-known for delivering compelling

and practical messages to audiences of more than 200,000 people per annum, including at some of the largest regional and international venues.

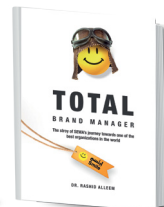
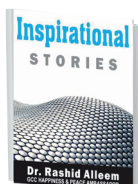
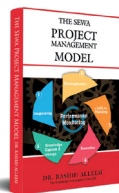
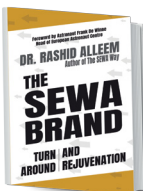
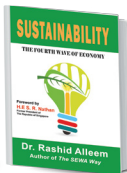
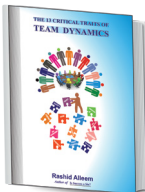
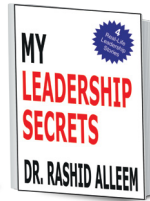
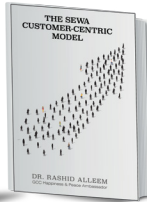
Last but not least, he is one of the most interviewed and published charismatic media personalities in the region. A prolific writer both in English and Arabic, Dr. Rashid Alleem is the author of several books on management and leadership. His newest book, *The SEWA Way*, showcases 15 winning principles, providing a roadmap for achieving success both on an organizational and a personal scale. Aiming to improve social, economic, and environmental living conditions worldwide and helping to improve the quality of life for hundreds of millions who have not yet seen the benefits of sustainable development and inclusive growth, he has written four books on the topic of sustainability: *My Green Journey in Hamriyah*; *Sustainability: The Fourth Wave of Economy*; *I Am Committed: 17 Global Goals*; and *Alleem Sustainable Development Goals*.

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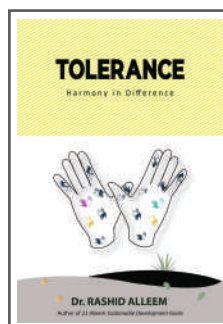
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